

Major/Career Field: Marketing

Areas of risk when working with data on machine learning and AI projects that can lead to bias, discrimination, and unfair treatment:	Steps to take to reduce or eliminate the bias, discrimination, and unfairness in your work:
<ul style="list-style-type: none"> - Underrepresented Racial and Ethnic Groups in Advertisements - If the machine learning and AI systems do not have the information to create advertisements with individuals of all races and ethnicities, discriminatory advertisements are more likely to be made. This can lead to bias toward certain groups. This refers to the Formalism Trap - Failure to account for the full meaning and social concepts such as fairness, which can be procedural, contextual, and contestable, and cannot be resolved through mathematical formalisms. Underrepresentation leads to unfair treatment. This also can be seen as the Ripple Effect Trap - Failure to understand how the insertion of technology into an existing social system changes the behaviors and embedded values of the pre-existing system. 	<ul style="list-style-type: none"> - To reduce this issue, organizations should collect and use only diverse datasets so that machine learning and AI systems create appropriate inclusive advertisements. It is vital to check for any bias and discrimination within the data before even using it. Emily Denton suggests conducting peer reviews during and after dataset development to mitigate this concern. Additionally, I will not allow advertisements to be pushed out to the public that underrepresent certain groups.
<ul style="list-style-type: none"> - Limited Data Collection Leading to Gender Bias - If organizations are only gathering data from certain industries that are either male or female-dominated, the machine learning and AI projects will reflect that bias and generalization in the content they create for marketing. The AI Bill of Rights refers to this as Algorithmic Discrimination. It occurs when systems contribute to unjustified treatment or effects disfavoring people based on their race, color, ethnicity, sex, religion, age, national origin, disability, veteran status, genetic information, etc.. This is also called the Framing Trap - Failure to model the entire system over which a social criterion, such as fairness, will be enforced. 	<ul style="list-style-type: none"> - The AI Bill of Rights suggests that data derived from other sources should be tracked and reviewed carefully. To implement this, all data should be monitored and reviewed by a diverse group of individuals. All data collected needs to be seen as high-risk and not immediately recognized as valid. I will make sure that when gathering data I retrieve it from a variety of sources. Automated systems should have ongoing measures to protect against this including proactive equity assessments, use of representative data and protection against proxies for demographic features, making sure people it is accessible for the disabled, ongoing testing, and organizational oversight. I will also review it with my peers prior to using it. I will not choose to collect data from limited sources, nor will I be the only individual to analyze it.

<ul style="list-style-type: none"> - Disability Bias in the Hiring Process - Both employers and AI systems that are involved in the hiring process may provide unfair treatment to disabled individuals. Some of the job applications may list that accommodations are needed. AI systems could be programmed by employers to filter out those applications from others. This refers to the Portability Trap - Failure to understand how repurposing algorithmic solutions designed for one social context may be misleading, inaccurate, or otherwise harmful when applied to a different context. This falls under the Solutionism Trap - Failure to recognize the possibility that the best solution to a problem may not involve technology. This is an instance where the human brain may be better than using any system. 	<ul style="list-style-type: none"> - According to the EEOC-DOJ warning, AI has the ability to screen out potential employees during the hiring process who have a disability and are able to perform the job with reasonable accommodations. This will allow employers to understand to include the disabled, rather than disregard them. It will also reduce human biases. I will fight for employers to offer accommodations to the disabled upon being hired. I will not allow the organizations I am involved in to disregard the disabled due to their needed accommodations.
<ul style="list-style-type: none"> - Notice and Explanation - You should know that an automated system is being used and understand how and why it contributes to outcomes that impact you. 	<ul style="list-style-type: none"> - People who are being impacted directly by the systems should be informed when changes in functionality occur. If customers' information is being manipulated by the marketing department for research, they should be informed of this. Reports should be made about the systems clearly and made public. I will not allow customers' data from research practices such as surveys and purchase history be used without consent and informing them.
<ul style="list-style-type: none"> - Data Privacy - You should be protected from abusive data practices via built-in protections and you should have agency over how data about you is used. This relates to the risk of Human Alternatives, Consideration, and Fallback - You should be able to opt out, where appropriate, and have access to a person who can quickly consider and remedy problems you encounter. 	<ul style="list-style-type: none"> - The designers, developers, and deployers of the automated systems need to ask for customers' permissions prior to the use of their data. Systems should not be able to use individuals' information without this consent to do so. The permission request should be simple for users to understand. Protections on sensitive domains should be put first. Data privacy should be monitored frequently.